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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,261	07/30/2001	John C. Tangen	56821US002	2230

32692 7590 07/14/2003

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EXAMINER	
YOON, TAE H	

ART UNIT	PAPER NUMBER
1714	5

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/918,261	Tangen
Examiner	**Group Art Unit**
T. Yoon	1714

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-21 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-21 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Interview Summary, PTO-413

☐ Notice of Informal Patent Application, PTO-152

☐ Other _____

Office Action Summary

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-15 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kangas (US 5,418,310) in view of Li et al (US 6,221,978).

Kangas teaches mixtures of isocyanate-terminated polyurethane prepolymers having good adhesion in abstract. The instant first prepolymer of at least essentially semicrystalline hydroxy-functional material is taught at col. 4, line 53 to to col. 5, line 42, and the instant second prepolymer of essentially semicrystalline hydroxy-functional material is taught at col. 5, lines 43-53. The instant invention further recites an amorphous hydroxy-funcational material having an average functionality less than 2.5 and a Tg of $\leq$ -20°C over Kangas. However, Kangas teaches employing an additional isocyanate-terminated polyurethane prepolymer of a hydroxy-funcational material having an average functionality of greater than 2 but less than 3.5 at col. 6, lines 35-48. Li et al teach an amorphous hydroxy-funcational material having a Tg of about -50°C (Dynacoll 7250) at col. 7, lines 13-16.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize Dynacoll 7250 of Li et al in Kangas as a hydroxy-funcational material for an additional isocyanate-terminated polyurethane prepolymer since Kangas teaches employing an

additional isocyanate-terminated polyurethane prepolymer of a hydroxy-funcational material having an average functionality of greater than 2 but less than 2.5 and since the use of an amorphous hydroxy-funcational material having a low Tg in a mixture of isocyanate-terminated polyurethane prepolymers is well known practice and since choosing a value of functionality within a range is a *prima facie* obviousness absent showing otherwise.

Claims 1-15 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krebs et al (US 2003/0045636) in view of Li et al (US 6,221,978) and Kangas (US 5,418,310).

Krebs et al teach mixtures of isocyanate-terminated polyurethane prepolymers having good adhesion in abstract. The instant first prepolymer and second prepolymer are taught in tables 1 and 2. The instant invention further recites an amorphous hydroxy-funcational material having an average functionality less than 2.5 and a Tg of $\leq$ -20°C over Krebs et al. However, Krebs et al teach employing an additional isocyanate-terminated polyurethane prepolymer in [0026]. Li et al teach an amorphous hydroxy-funcational material having a Tg of about -50°C (Dynacoll 7250) at col. 7, lines 13-16, and Kangas teaches employing an additional isocyanate-terminated polyurethane prepolymer of a hydroxy-funcational material having an average functionality of greater than 2 but less than 3.5 at col. 6, lines 35-48.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize Dynacoll 7250 of Li et al having an average functionality greater than 2 but less than 2.5 taught by Kangas as a hydroxy-funcational material for an additional isocyanate-

terminated polyurethane prepolymer in Krebs et al since Krebs et al teach employing an additional isocyanate-terminated polyurethane prepolymer and since the use of an amorphous hydroxy-funcational material having a low Tg and the instant functionality in a mixture of isocyanate-terminated polyurethane prepolymers is well known practice absent showing otherwise.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oien (US 5,721,311) in view of Li et al (US 6,221,978) and Kangas (US 5,418,310).

Oien teaches mixtures of isocyanate-terminated polyurethane prepolymers having good adhesion in abstract. The instant first prepolymer is taught at col. 7, line 41 to col. 8, line 56. An amorphous hydroxy-funcational material of C_2-C_3 polyoxyalkylene polyol such as propylene oxide is taught at col. 8, line 56 to col. 9, line7. and second prepolymer are taught in tables 1 and 2. The instant invention further recites a second prepolymer and an amorphous hydroxy-funcational material having an average functionality less than 2.5 and a Tg of $\leq$ -20°C over Oien. However, Oien teaches employing an additional isocyanate-terminated polyurethane prepolymer at col. 10, lines 17-23.

Li et al teach an amorphous hydroxy-funcational material having a Tg of about -50°C (Dynacoll 7250) at col. 7, lines 13-16, and Kangas teaches employing an additional isocyanate-terminated polyurethane prepolymer of a hydroxy-funcational material having an average functionality of greater than 2 but less than 3.5 at col. 6, lines 35-48, and the instant second prepolymer at col. 5, lines 43-53.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to utilize the second prepolymer of POLYMEG 2000 of Kangas in Oien as an additional isocyanate-terminated polyurethane prepolymer since Oien teaches employing an additional isocyanate-terminated polyurethane prepolymer and further to utilize an amorphous hydroxy-funcational material having an average functionality less than 2.5 and a Tg of $\leq$ -20°C in Oien with teaching of Li et al and Kangas since Oien teaches an amorphous hydroxy-funcational material and since the use of an amorphous hydroxy-funcational material having a low Tg and the instant functionality in a mixture of isocyanate-terminated polyurethane prepolymers is well known practice absent showing otherwise

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Monday to Thursday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

THY/July 10, 2003

TAE H. YOON
PRIMARY EXAMINER